

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-34 (canceled)

D | Claim 35 (previously presented): A control system for a water spa intended to remain substantially continuously filled between uses, comprising:

- an electrical power source for providing energy;
- a system interconnection panel in communication with the power source, the system Interconnection panel including a step-down power supply and a microcomputer; and
- a plurality of electronic and electrical components connected to the system interconnection panel, including an electronic control panel capable of displaying alphanumeric characters calculated by the microcomputer.

Claim 36 (previously presented): The spa control system of claim 35, wherein the step-down power supply included with the interconnection panel converts energy supplied by the power source into a lower power and a lower voltage as required by one or more of the electronic components connected thereto.

Claim 37 (previously presented): The spa control system of claim 35, wherein the water spa is intended for use as an outdoor spa vessel.

Claim 38 (previously presented): The spa control system of claim 37, wherein a Ground Fault Circuit Interrupter (GFCI) is connectively interposed between the electrical power source and the system interconnect panel.

Claim 39 (previously presented): The spa control system of claim 35, wherein one of the electrical components is a heating element, and another of the electrical components is a pump.

Claim 40 (previously presented): The spa control system of claim 39, wherein the heating element is an electrical resistive heating element and operates to heat water held by the spa.

Claim 41 (previously presented): The spa control system of claim 35, the spa control system further comprising an electronic circuitry associated with the microcomputer and being capable of converting analog signals to engineering units expressed as alphanumeric characters.

Claim 42 (previously presented): The spa control system of claim 35, the spa control system further including at least one electronic solid state temperature sensor to measure the temperature of water of the spa, and a second electronic sensor to measure another parameter of water of the spa.

Claim 43 (previously presented): The spa control system of claim 42, wherein the temperature sensor produces an electronic signal proportional to the temperature of water in the spa, and the second sensor produces an electronic signal indicative of presence or absence of water flow.

Claim 44 (previously presented): The spa control system of claim 43, wherein the microcomputer converts the electronic signals proportional to temperature to engineering units using a curve fitting algorithm.

Claim 45 (previously presented): The spa control system of claim 44, wherein the microcomputer is capable of displaying the temperature in alphanumeric engineering units on the control panel.

Claim 46 (previously presented): The spa control system of claim 43, wherein an error message is displayed on the control panel in alphanumeric characters when lack of water flow is detected by the second sensor.

Claim 47 (previously presented): A water spa for bathing, comprising:

a vessel for holding water and intended to remain substantially continuously filled

between uses;

a control system for a water spa intended to remain substantially continuously filled

between uses, comprising:

an electrical power source for providing energy;

a system interconnection panel in communication with the power source, the system

Interconnection panel including a step-down power supply and a microcomputer; and

a plurality of electronic and electrical components connected to the system

Interconnection panel, including an electronic control panel capable of displaying alphanumeric characters calculated by the microcomputer.

Claim 48 (previously presented): The water spa for bathing of claim 47, wherein the step-down power supply included with the interconnection panel converts energy supplied by the power source into a lower power and a lower voltage as required by one or more of the electronic components connected thereto.

Claim 49 (previously presented): The water spa for bathing of claim 48, wherein the water spa is intended for outdoor use.

Claim 50 (previously presented): The water spa for bathing of claim 47, wherein a Ground Fault Circuit Interrupter (GFCI) is connectively interposed between the electrical power source and the interconnect panel.

Claim 51 (previously presented): The water spa for bathing of claim 47, wherein one of the electrical components is a heating element, and another of the electrical components is a pump.

Claim 52 (previously presented): The water spa for bathing of claim 51, wherein the heating element is an electrical resistive heating element and operates to heat water held by the spa.

Claim 53 (previously presented): The water spa for bathing of claim 47, wherein the spa control system microcomputer and associated electronic components are capable of converting analog signals to engineering units expressed as alphanumeric characters.

Claim 54 (previously presented): The water spa for bathing of claim 47, wherein the spa control system further including at least one electronic solid state temperature sensor to measure the temperature of water of the spa, and a second electronic sensor to measure another parameter of water of the spa.

Claim 55 (previously presented): The water spa for bathing of claim 54, wherein the temperature sensor produces an electronic signal proportional to the temperature of water in the spa, and the second sensor produces an electronic signal indicative of presence or absence of water flow.

Claim 56 (previously presented): The water spa for bathing of claim 54, wherein the microcomputer converts the electronic signals proportional to temperature to engineering units using a curve fitting algorithm.

Claim 57 (previously presented): The water spa for bathing of claim 56, wherein the microcomputer is capable of displaying the temperature in alphanumeric engineering units on the control panel.

Claim 58 (previously presented): The water spa for bathing of claim 54, wherein an error message is displayed on the control panel in alphanumeric characters when lack of water flow is detected by the second sensor.